

Conference Discussion Paper

Design-to-launch projects

Managing end-to-end processes for innovations
in fast moving consumer goods

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Design-to-launch projects

Managing end-to-end processes for innovations in fast moving consumer goods with examples from Henkel AG, Procter & Gamble Corp., Unilever N.V.*

Abstract

Accelerating dynamics of global competition with ever-faster product lifecycles and ever-higher failure rates of innovation projects require companies to set-up an integrated and resource-efficient project management for product innovations across internal and external functions. Progressive consumer goods companies have incorporated an overarching end-to-end process approach from product idea and design to product launch in order to systemize innovation projects and align the organization along the innovation process. The stage-gate model is one of the most prominent approaches for implementing a design-to-launch process within organizations. However, the implementation of this approach is difficult as it requires a change in terms of organizational roles and responsibilities towards a shared process perspective. This change becomes most obvious in marketing management, which is required to develop from marketing mix focused brand ownership towards holistic innovation process ownership and needs to act as enabler and catalyst for change within the organization. Several implications for innovation project management arise for all organizational functions involved in the design-to-launch process.

This workshop presentation illustrates an end-to-end process view on global marketing and innovation projects in the FMCG industry and explains the teaching approach and case study to be used within the Euro MPM Module 5 (MP 30 Managing Global Business Projects) starting in the winter-term 2011/2012.

Key Words: *Project management, innovation, value chain, demand chain, supply chain, product design, product launch, marketing, consumer goods*

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**Examples will be part of the conference presentation and are still to be included in the paper.*

Requirements for global innovation projects

The dynamics of global competition in the fast moving consumer goods (FMCG) industry provide the ground for an accelerating innovation race with ever-shorter product life cycles and faster rollout of new products. Innovation rates are in a range of 35 – 45 %, which classifies FMCG companies as innovation front-runners in cross-industry comparison. Therefore, companies invest a significant part of their resources into new product development (NPD) projects and launch activities.

However, winning with product innovations is not easy at all. Empirical studies identify failure rates of new products in a range of 50 - 80 %, i.e. products exit the market within one year or do not achieve planned results (ACCENTURE 2008). In most cases, the reason for failure of product innovations is not a lack of resources to support the product launch, but misalignment and inefficient utilization of these resources throughout the innovation process. A common statement put forward by practitioners reflects this issue: "Every time we start a new product development project we fell like climbing Mount Everest. We know exactly where we want to be at the end of the project, but we have no clear perspective how to go there due to the complexity of the project". Empirical research proofs that many organizations spent a significant part of the overall time in NPD projects on trouble shooting. The problem is often not depending on existing methods and tools to solve the problem, but on not harmonized and disrupted processes. Researchers conclude that misalignment of functions involved in innovation projects and lacking coordination are major drivers of innovation failure. Due to the complex and time-sensitive character of NPD projects, a delay or misalignment of only one sub-process, task or activity puts the entire project at risk.

Therefore, companies are required to set-up an integrated and effective process for innovation projects across internal functions (e.g. research & development, supply chain management, key account management) and external partners (e.g. suppliers, distributors, market research and media agencies).

End-to-end process perspective on innovation projects

Progressive FMCG companies have incorporated an integrated end-to-end process that implements a comprehensive understanding from product design to product launch across all stages of the new product development process (BOOZ ALLEN HAMILTON 2010). This full-fledged end-to-end process view requires a holistic managerial approach for managing innovation projects by aligning cross-functional teams from the phase of idea generation, concept testing and marketing mix definition up to business planning and launch execution. This view has substantial implications for the understanding of the value chain. The end-to-end process perspective spans the entire value chain of a company and sets the focus on transactional processes across the organizational structure of departments involved in the design-to-launch process.

According to PORTER (1985), the value chain separates all activities of a company into a sequential chain composed of primary activities (i.e. inbound logistics, operations, outbound logistics, marketing & sales and service) and secondary (i.e. supportive) activities within the business organization that contribute to a value generating output. In this value chain definition, all core business processes are implicitly included such as supply chain management, customer relationship management and new product development. The revenues derived from the output reduced by the costs associated with each process and activity within the value chain determine the profitability of the company.

Value chain = Supply chain + Demand chain

The generic value chain has been adopted in a manifold way. RAINBIRD (2004) proposes a modification of the original value chain model and defines the value chain as the overarching framework comprising a supply chain and demand chain separated from each other as presented in figure 1.

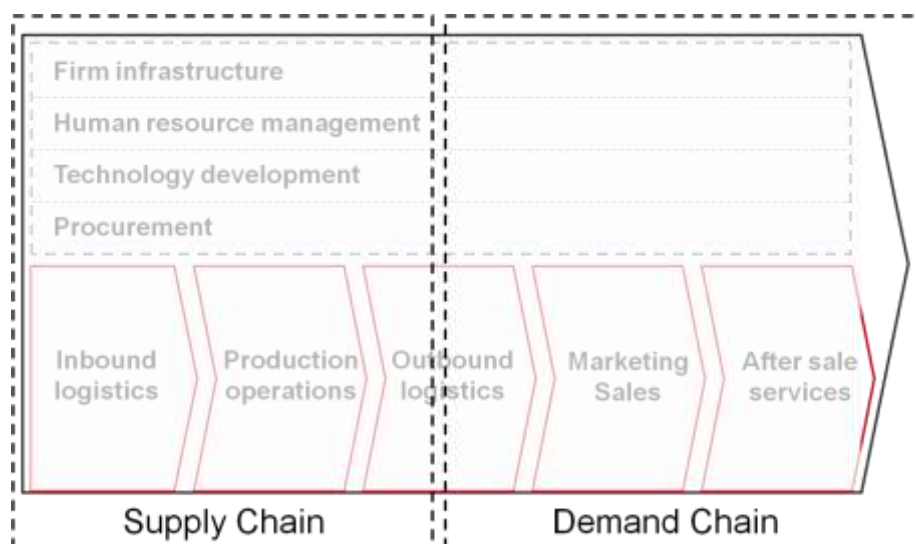


Figure 1: Supply and demand chain (RAINBIRD 2004)

The demand chain comprises outbound logistic functions, marketing, sales and customer service functions that connect the business with its customers. The supply chain represents the operational backbone of the business including inbound logistics and manufacturing functions that act on the specific request of the demand chain. The distinction between supply and demand chains allows for a specification of the different perspectives inherent to the respective functions involved. According to LANGABEER / ROSE (2001) the supply chain focus is on efficiency, i.e. cost per item, thus cost is seen as key driver for supply chain management, and on immediate resource and short-term capacity constraints. Contrarily, the demand chain focus is on effectiveness, i.e. product market fit, thus revenues are seen as key driver for managing the demand chain and on long-term capabilities as well as constraints due to the life-cycle of a product.

The difference in focus results from the classical divergence of marketing driven versus operation driven functions. An end-to-end process perspective starting from design to launch allows for aligning the revenue focus (i.e. top-line) and the cost efficiency focus (i.e. bottom-line) under the overall objective of profitable growth. In this respect, the supply and demand chain perspectives are not different anymore, but complementary perspectives contributing to the long-term success and capabilities of a company. However, the implementation of an end-to-end process perspective of the design-to-launch process requires a different view and level of analysis of the value chain set-up.

Process views of the value chain

Following from the stage-gate model the design-to-launch process needs to establish an overarching process view that spans the value chain across activities and organizational boundaries. ZENTES ET AL. (2004) propose a modified illustration of Porter's value chain based on a process perspective that differentiates between core processes, management and support processes. The authors define supply chain processes and market development including marketing and research & development as the two core processes as shown in figure 2.



Figure 2: Process view of the value chain (ZENTES ET AL. 2004, p. 222)

This definition is congruent to Rainbird's differentiation of a separate supply and demand chain and acknowledges the importance of these two core processes. The core processes cover all activities across the value chain from end-to-end. All administrative and supportive processes are subordinated for best servicing the core processes. However, this view lacks an important aspect from an end-to-end process view because supply chain processes and market development processes are still defined as separated processes and do not reveal the interconnections and mutual interdependence of the activities and tasks performed within each process flow.

An attempt to integrate all relevant activities and sub-activities performed by several organizational functions across the supply and demand chain in order to span the

value chain from end to end has been undertaken by the supply chain council (SSC). This institution aims for a standardized methodology of supply chain management and developed the supply chain operations reference (SCOR) model as centerpiece of corporate supply chain management. The SSC defines a supply chain as the integrated processes of planning, sourcing, making, delivering and returning, reaching from the suppliers' supplier to the customers' customer in alignment with the operational strategy, material, work & information flows of the company in focus (SSC 2010).

The shortcoming of the SCOR model has been identified as an exclusively supply chain centric approach while limiting market and consumer focus in the organization (cp. RAINBIRD, M. / WALTERS, D. 2004, p. 466). Taking the critique into account the SSC elaborated a more sophisticated model that establishes a multilayered perspective of several parallel process chains. This model follows the SSC value chain based on the integrated macro processes of marketing, design, supply and customer that reach from market to market on either side (i.e. supply and demand) involving customers and consumers as well as suppliers. Consequently, the SSC started to elaborate generic frameworks for the essential macro processes as portrayed in figure 3. While the market(ing) chain is still to be developed, the design, supply and customer part of the value chain are defined and set into a process context.

The SSC proposes a generic design chain operations reference (DCOR) model defined as the integration of planning, researching, designing, integrating and amending processes. The design chain is embedded as a separate and parallel process chain in connection to the market and supply chain. The market chain initiates the design chain processes by articulating the market requirements identified within the market

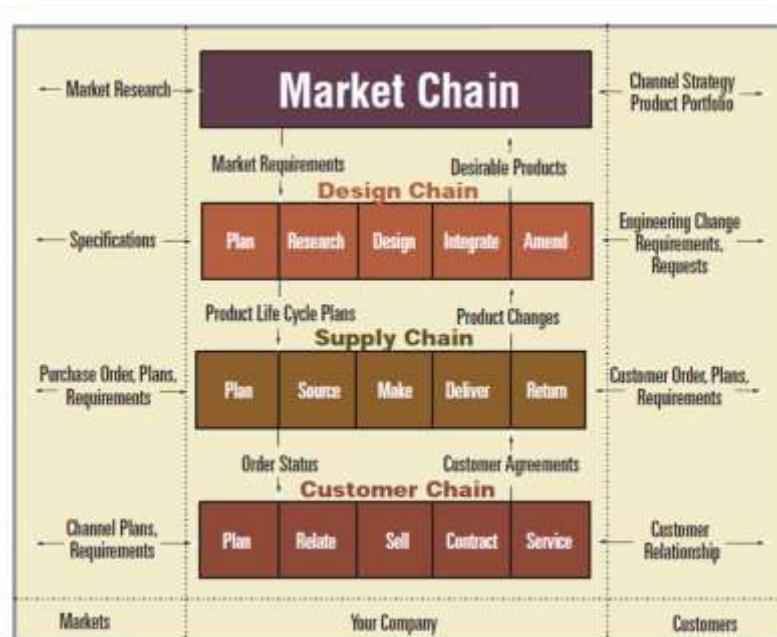


Figure 3: Value chain process map (BOLDSTORFF 2005, p. 20)

chain processes. The design chain elaborates the product lifecycle plans and initiates the planning of the supply chain process. The customer chain operations reference (CCOR) model is subordinated to the supply chain and defined as the integration of planning, relating, selling, contracting and servicing processes. Subsequent to customer agreements, the supply chain executes delivery and / or return of products. If supply chain induced product changes occur, the design chain integrates and amends the go-to-market plan, which is executed by the market chain.

This proposal offers a structured drill down of the core value chain activities into several generic process chains following a strict end-to-end perspective. The supply chain processes are embedded in the overall value chain processes and constitute the operational backbone without overemphasizing the supply chain processes compared to the remaining value chain processes. A key advantage of this model is the illustration of the interaction of cross-functional activities within the overall value chain process view in a "[...] plan full, directive and yet adaptive way that satisfy [...] customer requirements and help [...] grow profitably" (cp. BOLDSTORFF 2005, p. 20).

However, the SSC concept lacks still a fully integrated end-to-end process view. The definitions within the four macro processes follow an organizational design and remain restricted and isolated within the respective organizational function. While the market chain is clearly attributed to the marketing department, the responsibility for the design chain is in the R&D department, the supply chain is managed by the supply chain manager and the customer chain is governed by the sales department. The proposed model describes only the process flow within the functions and the mere interactions between organizational functions, but lacks an integrated approach to the common tasks and activities. Additionally, the complex hierarchy of horizontal and vertical process flows seems to be of limited use for implementation despite its organizational focus.

Furthermore, the customer focus is isolated and subordinated due to a separate customer chain without connection to the market chain. The fact that the market(ing) chain is still undefined shows the difficulty of defining the marketing function as a separate and isolated entity in the value chain. An integrated and overarching role of marketing could help to solve this process dilemma.

End-to-end perspective of an integrated design-to-launch process

A business process architecture that offers a cross-functional and integrated perspective to all of the value chain processes needs to turn away from a pre-fixed organizational fundament. The integration of cross-functional process tasks requires a parallel and joint execution of certain activities within process stages. Therefore, such a perspective requires putting process over business organization and departments. A precise and detailed definition of processes, sub-processes, tasks and activities helps to structure the process flow for all departments and functions involved in the value chain processes.

It is useful to differentiate between core processes and administrative or supportive processes. Core processes are constituted by a high shaping character and either create or dispose of valuable, rare, inimitable and organizational specific resources (cp. BARNEY 1991, p. 117). Administrative or supportive processes are distinguished by a high safeguarding or servicing character of the tasks and activities carried out. The core processes could be defined as insight & decision-making, design-to-launch and source-to-deliver. The difference to the SSC concept is that the processes involve and integrate several organizational departments and functions in the process flow. As the supportive processes are not in scope of this paper, the focus is directly on a definition and description of the core processes illustrated in figure 4.

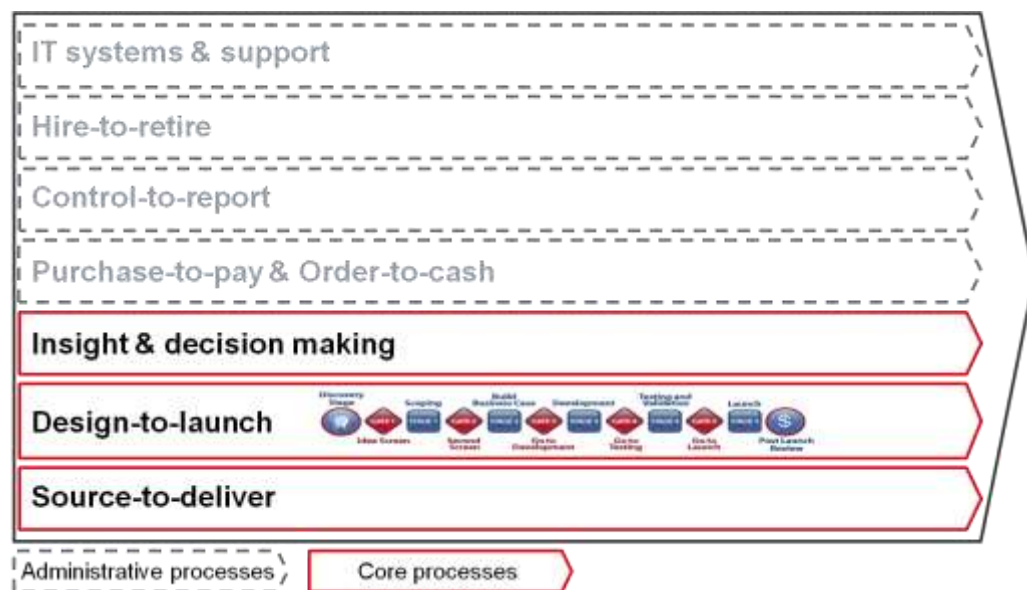


Figure 4: End-to-end process view of the value chain

The insight & decision making process covers all tasks and activities occupied with insight generation relevant to decision making by general management for the going business. Several departments contribute to this process providing performance analysis and competitive studies with recommendations for management action. This process is linked to the control and report process but focused on management action in the operative going business, while control-to-report is dedicated to the financial controlling and reporting obligations and standards.

The source-to-deliver process covers all tasks and activities from sourcing including supplier selection and negotiation to manufacturing and delivering and integrates e.g. the purchasing and legal department in the selection and negotiation of suppliers, toll manufacturers and haulers. Moreover, R&D is integrated in the continuous optimization of formulas and the sales function is integrated in order to optimize customer-specific cooperation.

The design-to-launch process spans across all tasks and activities from product idea generation and winning concept creation, to product development and testing and

finally launch execution. It is different from the continuous insight & decision-making processes due the project driven character and the creativity inherent to design-to-launch projects. Therefore, this process appears to be the most complex one. However, a clearly defined integrated process flow with checkpoints in order to evaluate the proceeding of the innovation project based on a common set of criteria within a cross-functional decision body might offer an appropriate solution.

Design-to-launch process

The stage-gate model is one of the most prominent approaches to systemize design-to-launch projects (PRODUCT DEVELOPMENT INSTITUTE 2010). This approach is based on the use of funnel tools that are known from decision-making. The process flow of the stage-gate model is a sequence of working stages and decision gates as illustrated in figure 5. This stage-gate® model fits perfectly well in the design-to-launch process view integrated in the value chain activities as developed in this paper.

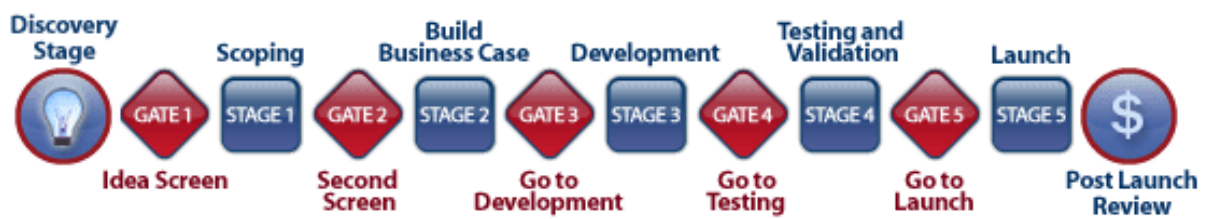


Figure 5: Stage-gate® model (PRODUCT DEVELOPMENT INSTITUTE 2010)

The sequence of stages and gates is structured in a way to consistently narrow the scope on the most valuable innovation projects, i.e. the innovation funnel. Stages constitute working phases and are defined as idea generation, product development and feasibility studies, product launch and monitoring. Gates are characterized as decision points on further product development, launch and execution and they are placed where they are most beneficial to the continuity of new product development. A detailed definition of stages and gates in this model is given in appendix 1.

The process flow is governed by the gatekeeper who is responsible for decision making and moving the project to the next stage. A gatekeeper is represented by a decision body consisting of a cross-functional team staffed with managers from marketing, sales, R&D, market research and a controlling function e.g. marketing or sales controlling. The cross-functional composition of the decision body ensures a comprehensive perspective and evaluation of the product concept and launch plan in order to align market needs with technical feasibility and financial requirements of the overall company strategy. Furthermore, the cross-functional decision body is responsible for continuous refinement and optimization of the product-marketing mix proposed by the marketing function right from the start of the new product development project until the end of this process. As a result, the shared perspective aligns all functions involved while integrating market needs and consumer into the entire new product development process.

As businesses strengthen their focus on customers and consumers process thinking it is essential to organize and manage a company around the axis of process in order to achieve and maintain the performance levels that customers and consumers demand. The process perspective needs to be implied even to the creative process stages in a company in order to achieve agility, flexibility and high performance (HAMMER 2001).

Henkel AG & Co. KGaA (Henkel) shows an example for an effective implementation of a stage-gate system. The consumer goods company is a global leader in brands and technologies organized into three globally operating business sectors: laundry and home care, cosmetics and toiletries, adhesive technologies. In fiscal 2010, the company generated sales of 15,092 M€ and operating profit of 1,862 M€ (adjusted) and is part of DAX 30 and Fortune Global 500. Henkel introduced a stage-gate® system called Henkel Inno Gate (HIG) adapted to Henkel needs in 2007 in order to steer all product lifecycle activities efficiently (MÜLLER-KIRSCHBAUM 2009).

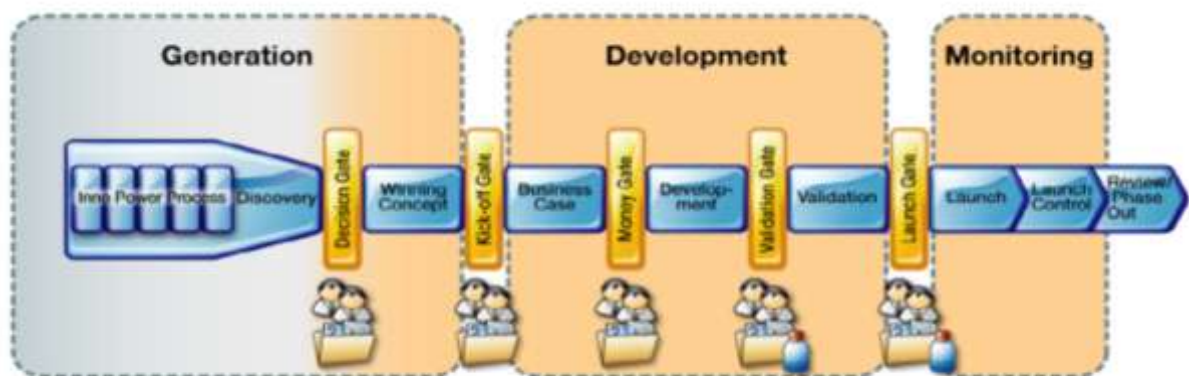


Figure 6: Henkel Inno Gate model (MÜLLER-KIRSCHBAUM 2009)

HIG divides the NPD process into three major phases. The “Inno Power” phase covers the front-end of consumer insight generation and idea creation, thus fueling the subsequent phases. The development phase ensures the efficient transformation of ideas into winning concepts, their translation into NPD projects, followed by the (technical) development of products and the launch execution. The final phase of the HIG process covers all launch control and monitoring activities. This phase is closely linked to the review & phase-out process that describes all activities and processes dealing with assortment renewal and optimization forming part of the going business.

Henkel evaluates the stage-gate process as key enabler for the efficient implementation of prioritized innovation ideas into successful consumer-oriented products driven by shared process standards, transparent process design supported by state of the art system architecture and project management support tools.

Henkel ensures that process standards are shared throughout the entire organization in order to generate structured and comparable information available to all relevant target groups. This improves collaboration in cross-functional project teams and provides a better fundament for decision making to Senior Management. The HIG process design is based on clearly defined work packages (stages), decision points (gates) and clear deliverables and timelines. The process prevents superfluous loops and unstable project/product specification.

The technical backbone of the HIG is state of the art information technology allowing instant access to up-to-date project and pipeline information. All parties involved are able to create of standard presentation decks for decision-making or reporting purposes. The modular IT architecture also allows for changes and improvements to ensure the needed flexibility for different project types. HIG features an integrated project management tool including export/import functionalities covering the needs of expert project managers. This facilitates coordination and increases transparency especially for the marketing function.

After having developed how this end-to-end process view connects the cross-functional activities of a business organization for innovation projects within the overall value chain based on the stage-gate model, it is required to review the impact on the organization. In this regard, the interfaces between different organizational functions have to be analysed and a modus operandi as well as detailed job profiles have to be defined in order to advocate a smooth and agile new product development process.

The new role of marketing: Holistic innovation process ownership

A seamless and agile new product development process is essentially based on cross-functional collaboration and thus requires a holistic process perspective for NPD, which is understood and shared throughout the entire organization. This requires clear and transparent guidance for responsibilities of all parties involved worldwide in order to ensure a common perspective on medium- and long-term strategic plans as well as guidance on short-term actions and target across the entire organization and along a well-defined stage-gate process. This has to be based on a standardized and harmonized design-to-launch process. To that end, a process framework including a detailed description of the governance and interaction model as well as process instructions need to be defined, agreed across all parties and introduced including extensive training on the process method and tools. This includes also the introduction of continuous process performance measurements based on KPI, lead times etc.

This new process perspective affects the entire organization. In order to align global business and local organizations on a common holistic process perspective under one single overall objective, the process framework needs to be integrated and applied consistently. This requires a function that facilitates a comprehensive perspective by effective communication and alignment of cross-functional project work. Additionally,

this function needs to have a well-balanced mix of strategic as well as operational expertise in order to develop a competitive go-to-market approach. This includes the penetration of the market and customer focus throughout the organization. There seems to be no more apt function than marketing to take this role. However, Marketing needs to develop the required capabilities, i.e. a new mindset and an increased responsibility compared to classical marketing tasks, which could be described as holistic innovation process ownership.

The holistic process ownership involves marketing actively in all stages of the design-to-launch process thereby enabling a shared perspective in cross-functional teams by integrating and coordinating all functions and departments involved in the process. "[...] Interfunctional coordination is key to achieving the main goal of marketing, the creation of superior customer value. [...]. The overarching rationale [...] is that customer value is being created through the integration of areas that are not traditionally associated with marketing" (cp. JÜTTNER 2004, p. 1). This rationale represents a shift in the overall organizational mindset and implies a qualitative change of the collaboration and interaction between marketing and all other functions and departments coming from a briefing-and-done culture towards an intense interact-and-reason culture. The change of mindset concerns all parts of the worldwide organization and requires developing a collaboration model of functions that is based on shared methods, tools and resources. The respective functions remain the expert for certain activities, but especially these functions that perform transactional tasks in the process need to provide their methods and tools to the process organization and share their insights and expertise, thereby acting as a competence center to serve best the progress of the process.

Consequently, the focus on functions within an organization shifts towards a stronger focus on competences (centers) within a process organization. Moreover, the hierarchical attitude of functions develops into a collaborative process attitude of competence centers in a design-to-launch process. Time-consuming validation processes within functions involving always superior management validation will be replaced by transparent validation process at decision gates performed by cross-functional teams.

Furthermore, the overall organizational mindset of all parties involved in a design-to-launch process absorbs a profound consumer orientation. A vital function of marketing is to ensure that consumer and market insights are understood and looped up in the organization to the end of continuously optimizing the product offer while integrating all functions and departments in this process and facilitating exchange of knowledge and expertise. Therefore, marketing is required to facilitate an integrated process perspective by disseminating consumer insight and market information. A summary of these implications of the design-to-launch process perspective on the corporate culture and organizational mindset throughout the entire organization is illustrated below.

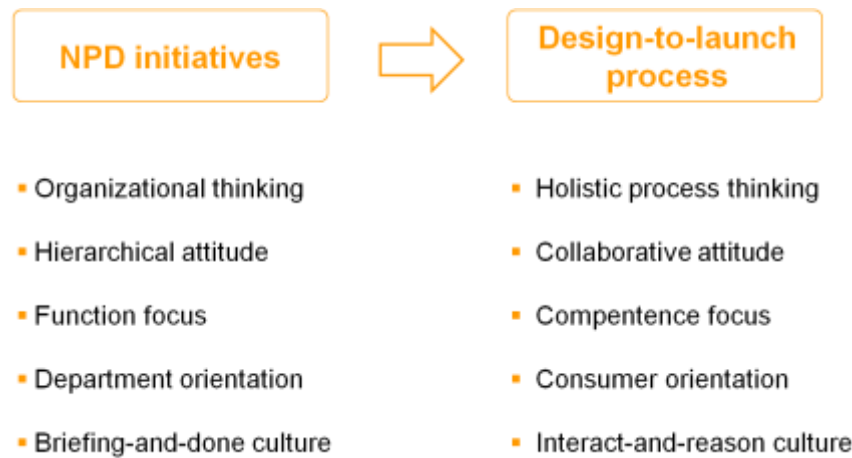


Figure 7: Implications on corporate culture and organizational mindset

Consequently, the role of marketing in the design-to-launch process changes. The end-to-end process view requires marketing to act as project manager for NPD projects as well as process owner for the design-to-launch process. The coordination of NPD projects across all stages and gates constitutes an essential success factor. In the project management role, marketing drives the new product development projects across all stages of the innovation process. This role is well established in Marketing and depicts the current view on the role and responsibility of marketing. The process responsibility adds a new responsibility and comprehensive set of tasks to the classic marketing function. This implies that the marketing manager needs to act as facilitator of the common and transparent design-to-launch process perspective and as process owner along the entire process. Consequently, the perspective and role of product management is required to change from marketing mix focused brand ownership towards holistic innovation process ownership.

Furthermore, marketing is part of the decision bodies at the gates of the design-to-launch process. Thus, marketers have still to be strategists in order to develop a competitive go-to-market approach while showing excellence in operational processes at the same time. To the end of integrating functions and responsibilities and aligning cross-functional project work, marketers have to be effective communicators. The respective job profiles and organizational roles need to be defined in detail based on process maps and not on organizational hierarchies.

The shift towards a process perspective enhances the flexibility and adaptability of the entire organization to dynamic environments and changing customer needs. A standardized and harmonized design-to-launch process enables excellent NPD projects and realizes competitive advantage across the financial, customer or consumer, process and human resource dimensions, thus covering all dimensions of the balanced scorecard reflecting the key performance indicators in an organization (KAPLAN, R. / NORTON, D. 1992). With regard to the process and customer dimension, the design-to-launch process reduces time-to-market and increases transparency as well as flexibility while limiting complexity at the same time. Concerning the financial

and strategic perspective the design-to-launch process optimizes the usage of resources and aligns the organization on the overall strategic objectives. The human resource dimension is positively impacted by reduced organizational slack, increased cross-functional collaboration and organizational flexibility as well as adaptability. The application of the balanced scorecard measurements on the performance of design-to-launch processes facilitates the implementation and application of this perspective.

In a dynamic global economy, that company has competitive advantage, which is most adaptable and responsive to change (McCALLUM 2001). The design-to-launch process enhances the adaptability and responsiveness of companies.

Concluding comment

It is suggested that the cross-functional process view covers the entire new product development process from the design up to the launch phase and facilitates a consistent go-to-market strategy definition. The integration of consumer insights in the entire process catalyzes a market and consumer based view within the company. Because of this perspective, companies strengthen their competitive advantage and excellence in execution, i.e. reduced time-to-market, increased transparency and flexibility, limited complexity and optimized usage of resources. These benefits resulting from a design-to-launch process perspective are realized across all dimensions of the comprehensive balanced scorecard perspective. Regarding the implementation of a design-to-launch process, Marketing is required to take the lead and needs to adapt to the new role as well as responsibility and integrate all functions involved.

The Euro MPM module MP 30 GB "Managing Global Business Projects" is designed and dedicated to the development of a precise understanding of the cross-functional design-to-launch project perspective and provides interactive case study work from consumer goods companies in order to practice the application of a collaborative cross-functional process perspective.

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Appendix

Table 1: Definition of stages in the stage-gate model

Stage 0 Discovery	Diverse activities designed to generate new product ideas, e.g. brainstorming sessions.
Gate 1 Idea screen	Elimination of unsound concepts / ideas or request to rework weak concepts prior to commitment of resources
Stage 1 Scoping	Comprehensive analysis and evaluation of the relevant product market based on a standard framework, e.g. SWOT interaction matrix
Gate 2 Project screen	Preliminary project assessment on feasibility (technological competence and requirements) and marketability (consumer needs and product concept).
Stage 2 Business case	Solid analysis of proposed project in four main steps: Product definition and analysis, building the business case, setting the project plan, and feasibility review
Gate 3 Go to development	Detailed cross-functional project assessment based on a precise product definition, project justification and execution plan including business planning
Stage 3 Development	Development and definition of actual product design including planning of manufacturing, operations, marketing launch and testing (to be used in Stages 4/5).
Gate 4 Go to testing	Approval of the project including customer / consumer acceptance and revised business plan and precise forecast
Stage 4 Testing & validation	Validation of the detailed project including of the designed product itself, the production/manufacturing process, customer acceptance, and the financials of the project. Testing and Validation is broken up into near testing, field testing, and market testing.
Gate 5 Go to launch	Approval of the product launch package including full launch support in alignment with all functions involved.
Stage 5 Launch	Full scale production, promoted launch and commercialization of the product innovation.